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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,854	08/08/2004	David W. Burns	DWB002	4853
45827	7590	03/20/2006	EXAMINER	
DAVID W. BURNS 15770 RICA VISTA WAY SAN JOSE, CA 95127			LIANG, REGINA	
			ART UNIT	PAPER NUMBER
			2674	
DATE MAILED: 03/20/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/710,854	<b>Applicant(s)</b> BURNS, DAVID W.	
	<b>Examiner</b> Regina Liang	<b>Art Unit</b> 2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This Office Action is responsive to reply filed on 2/2/06. Claims 1-39 are currently pending in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 102***

3. Claims 1-4, 6, 8, 10-13, 15, 16, 18, 20, 21, 23, 26-32, 35-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Ogawa (US. PAT. NO. 6,100,538).

As to claims 1, 31, Ogawa discloses a system (Figs. 1, 16 for example) for determining a stylus position of a stylus (2), comprising: a telemetric imager (detecting unit 3R, 3L); and a controller (circuit component 8 as shown in Fig. 2 constitutes processor means) electrically coupled to the telemetric imager (processor means incorporated in the detecting unit 3R and 3L; see col. 7, lines 27-28, 47-51); wherein the controller determines the stylus position based on a generated image of a stylus tip from a first direction (from detecting unit 3L) and a generated image of the stylus tip from a second direction (from detecting unit 3R) when the stylus tip is in a stylus entry region (col. 7, lines 27-39 for example).

As to claim 2, Ogawa teaches the stylus comprises a pointer (col. 1, line 9).

As to claims 3, 8, 10, Fig. 1 of Ogawa teaches a writable medium (1) in the stylus entry region.

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As to claim 4, Ogawa teaches the stylus includes a writing-mode imaging target near a writing end of the stylus (detecting the writing end touches on the plane 1, which reads on a writing-mode imaging target as claimed).

As to claim 6, Ogawa teaches the telemetric imager comprises two optical imaging arrays (linear image sensors 13 as shown in Fig. 2 both detecting units 3L, 3R).

As to claim 11, Fig. 22 of Ogawa teaches a light source (31) positioned near the telemetric imager (3), wherein light emitted from the light source illuminates the stylus tip when the stylus tip is in the stylus entry region.

As to claims 12, 13, Ogawa teaches the light source comprising LED (col. 10, lines 12-13).

As to claim 15, Fig. 23 of Ogawa teaches an optical filter (39) positioned between the telemetric imager and the stylus, and the optical filter preferentially passes light from the stylus tip to the telemetric image.

As to claim 16, Figs. 1, 21, 24 of Ogawa teaches a communication port connected to the controller to enable communication between the controller and a digital computing device (5).

As to claim 18, Ogawa teaches the telemetric imager and the controller are contained in a housing (see Fig. 2).

Claim 20 is a method claim corresponding to the above apparatus claim 1, is rejected for the same reasons as stated above since such method "steps" are clearly read on by the corresponding "means".

As to claim 21, Ogawa teaches the telemetric imager comprises two optical imaging arrays (linear image sensors 13 as shown in Fig. 2 both detecting units 3L, 3R).

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As to claims 23, 32, Fig. 22 of Ogawa teaches illuminating the stylus tip with a light source (31) when the stylus tip is in the stylus entry region.

As to claims 26, 27, 35, 36, Ogawa teaches determining angular information of the stylus (angle or rotation of the stylus) when the stylus tip is in the entry region (col. 7, lines 27-32).

As to claims 28, 37, Fig. 1 of Ogawa teaches a writable medium (1) in the stylus entry region.

As to claims 29, 38, Fig. 1 of Ogawa teaches sending the determined stylus position to a digital computing device (personal computer 5).

As to claims 30, 39, Ogawa teaches interpreting the determined stylus position (col. 7, lines 34-39).

### ***Claim Rejections - 35 USC § 103***

4. Claims 5, 25, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of Brown et al (US. PAT. NO. 4,430,526 hereinafter Brown).

Ogawa does not disclose the stylus includes an erasing mode image target near an erasing end of the stylus. However, Figs. 2 and 3 of Brown teaches a stylus (30) has a writing mode near writing end of a stylus (32), an erasing mode near an erasing end of the stylus (31). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the stylus of Ogawa to have an erasing mode as taught by Brown so as to provide pointing device which is capable of performing writing and erasing operation.

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5. Claims 7 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of Griffin (US. PAT. NO. 4,553,842).

Ogawa does not disclose using one optical imaging array to generate the image of the stylus tip from the first and second directions. However, Fig. 2 of Griffin teaches using one optical imaging device to generate image of the input pointer from the first and second directions (detector assembly 28, col. 4, lines 5-26). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ogawa to use one optical imaging detector as taught by Griffin so as to provide an optical position locating apparatus of simple low cost, easily maintained rugged construction (col. 2, lines 60-62 of Griffin).

6. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of Wood et al (US. PAT. NO. 6,414,673 hereinafter Wood).

Ogawa does not disclose the writable medium comprising a sheet of paper. However, Wood teaches a stylus entry region comprising a sheet of paper (e.g. col. 11, lines 10-24). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the writable medium of Ogawa to have a sheet of paper as taught by Wood since this allows the user to draw or write on the writable medium such that both an electronic copy and a hardcopy is available as a record to the user at the same time.

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of McDermott et al (US. PAT. NO. 5,635,683 hereinafter McDermott).

Figs. 1, 21, 24 of Ogawa teaches a communication port connected between the controller and a digital computing device (5). Ogawa does not explicitly disclose the communication port is one of a wired port or a wireless port. However, McDermott teaches a controller (processor 18 in Fig. 1) connected to a digital computing device (host computer 16) via a wire or wireless link (e.g. col. 9, lines 48-51). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Ogawa to use a wire or wireless communication link for connecting the controller and the computing device so as to readily transmit information from the controller to the computing device.

8. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of Yoshida et al (US. PAT. NO. 5,401,917 hereinafter Yoshida).

Ogawa does not disclose a stylus holder formed within the housing and receives the stylus for stylus storage. However, Fig. 1 of Yoshida teaches a housing of pen input device having a stylus holder (3) formed within the housing and receives the stylus (5) for stylus storage. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Ogawa to have a stylus holder as taught by Yoshida so as to allow stylus to be easily inserted and extracted thereto the therefrom and the stylus being held in a stable manner when inserted inside (col. 1, lines 13-15 of Yoshida).

9. Claims 14, 24, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa in view of Badyal et al (US. PAT. NO. 6,151,015 hereinafter Badyal).

Ogawa teaches a controllable light source positioned near the telemetric image (see Fig. 22), and a first set of images of the stylus tip from the first direction and the second direction are generated with the light source on, and wherein a second set of images of the stylus tip from the first direction and the second direction are generated with the light source off. Ogawa also teaches using the first set of images and the second set of image to determine the stylus position (col. 11, lines 11-35). Ogawa does not disclose comparing the first set of images and the second set of images to determine the stylus position. However, Badyal teaches a computer pointing device comprising optical sensor for capturing images, the newly captured image is compared with previously captured image to determine the stylus position (col. 4, lines 14-20). Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Ogawa to have a comparator as taught by Badyal to ascertain the direction and amount of movement.

### ***Response to Arguments***

10. Applicant's arguments filed 2/2/06 have been fully considered but they are not persuasive.

Applicant's remarks regarding Ogawa as to claims 1 and 13 on pages 9-15 are not persuasive. First, in response to applicant's argument on the paragraph between pages 9-10 that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the system of Burns [applicant], which has a telemetric image and controller, requires only a single telemetric image (see, for example, Fig. 1)) are not recited in the rejected claims. Although the claims are interpreted in light of the specification,



limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant's argument in that the difference exists between the linear image sensors in the detecting units of Ogawa and the telemetric imager of Burns on pages 10-11 are not persuasive since applicant is reading limitations into the claims. Also, as shown in Figs. 2 and 26, and col. 8, line 56 to col. 93 of Ogawa, teaches the each detecting unit (3L, 3R) having the linear image sensor 13 to detect the image formation point of the stylus tip, which reads on "a generated image of a stylus tip from a first direction and a generated image of the stylus tip from a second direction" as claimed.

In responsive to applicant's argument on pages 11-14 regarding the collimator requirement and collimating function of Ogawa, applicant's claims does not preclude using any collimators or collimating function, therefore, applicant's argument are not persuasive.

In response to applicant's argument that the triangulation method of Ogawa differs from that of Burns (page 15) and that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the system of Burns determines the stylus position by comparing a first set of images and a second set of images from a telemetric imagers using a controller electrically coupled to the telemetric image) are not recited in the rejected claims 1 and 31. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In addition, in claim 14, 24, and 33, the examiner relies on Badyal (col. 4 lines 14-20) to teach that newly captured image (second set

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of image) is compared with previously captured image (first set of images) to determine the stylus position.

Applicant's remarks regarding claim 2 are not persuasive. Col. 1 line 9 of Ogawa teaches the pointing object such as a finger, a stylus or a pointing stick, which reads on "the stylus comprises one of a pen, a pencil, a pointer, or a marker" as claimed.

As to claims 3, 8 and 10, Fig. 1 of Ogawa shows the stylus tip of stylus 2 allows writing on the coordinate plane 1, the coordinate plane 1 Ogawa reads on "a writable medium" as claimed. Applicant argues that "the shield means, not required in Burns, makes writing on a writable medium such as a sheet of paper or a pad of paper inside the shield frame difficult, at best", which are not persuasive since applicant is reading limitation into the claims.

As to claim 4, Ogawa teaches using the detecting unit (3L, 3R) to detect the stylus tip writing on the coordinate plane, wherein the detecting unit includes the linear image sensor 13 to detect the image formation point of the stylus tip, which reads on "the stylus includes a writing-mode imaging target near a writing end of the stylus" as claimed. In addition, applicant's remark that "the use of an imaging target is recognized as means to rapidly and certifiably identify a particular object in the field of view. Ogawa makes no reference to such a target" are not persuasive since applicant is reading limitation into the claim.

As to claim 6, in response to applicant's argument in that "the apparatus of Ogawa requires two optical detectors that are not co-located and are arranged separately from each other by a predetermined distance in the horizontal direction over the coordinate plane 1", again, applicant is reading limitation into the claim. The claim requires "two optical imaging arrays to generate the image of the stylus tip from the first direction and the image of the stylus tip from

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the second direction”, and Ogawa clearly teaches using two optical imaging arrays (one in detecting unit 3L, another one in detecting unit 3R) to generate the image of the stylus tip from the first direction (3L) and the image of the stylus tip from the second direction (3R). Therefore applicant’s remarks are not persuasive.

Applicant’s remarks regarding claim 11 are not persuasive since Fig. 22 of Ogawa clearly shows a light source 31 positioned near the telemetric imager. The claim does not precluding using a half-silvered mirror and the claim does not require “only one light source” located near the telemetric imager.

As to claims 12 and 13, the claims recite alternative limitation of the light source is selected from the group including of LED, a laser diode, etc., and Ogawa teaches the light source comprising an LED, which reads on the claims.

As to claim 15, applicant’s argument that “the invention of Burns requires only one such filter” is not persuasive since applicant is reading limitation into the claim.

As to claim 16, applicant’s argument in that “the system of Burns only requires one communication port since it has a single telemetric imager, and only one processor versus the two processors of Ogawa” are not persuasive since applicant is reading limitation into the claim.

As to claim 18, applicant argument in that “the system of Burns requires only a single housing and no shield” is not persuasive since applicant is reading limitation into the claim.

As to claim 20, see the remarks regarding claim 1 above.

As to claim 21, applicant’s argument in that “the two optical imaging arrays are housed in one telemetric imager” is not persuasive since applicant is reading limitation into the claim.

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As to claim 23 and 32, applicant argument in that “the invention of Burns requires only one light source” are not persuasive since applicant is reading limitation into the claim.

As to claims 26, 27, 35 and 36, Ogawa teaches determining angular information of the stylus, which reads on determining a stylus angle or stylus rotation of the stylus as claimed. Again, applicant’s argument in that “the stylus angle of the stylus refers to the angle of the stylus with respect to the stylus entry region, that is, what angle of the stylus is elevated to from the stylus entry region or equivalently, how many degrees from normal the stylus is with respect to the stylus entry region” are not persuasive since applicant is reading limitation into the claim.

As to claim 28 and 37, Fig. 1 of Ogawa shows the stylus tip of stylus 2 allows writing on the coordinate plane 1, the coordinate plane 1 Ogawa reads on “a writable medium” as claimed.

Applicant’s remarks regarding claims 29 and 38 are not persuasive since Ogawa teaches the limitations contained therein and since claims 20 and 31 to which these claims depend from are not allowable.

As to claims 30 and 39, col. 7, lines 34-39 of Ogawa teaches “based on the received positional information, the personal computer 5 generates an image signal corresponding to the positional coordinates indicated by the stylus 2. The display panel 6 operates based on the image signal input from the personal computer 5 to optically reproduce the character or graphic drawn by the stylus2” which reads on interpreting the determined stylus position as claimed.

In response to applicant's argument on pages 21-28 regarding the combination of Ogawa and Brown (claims 5, 25, 34), the combination of Ogawa and Griffin (claims 7 and 22), the combination of Ogawa and Wood (claim 9), the combination of Ogawa and McDermott (claim 17), the combination of Ogawa and Yoshida (claim 19), and the combination of Ogawa and

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Badyal (claims 14, 24, 33), the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

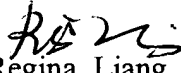
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Regina Liang  
Primary Examiner  
Art Unit 2674

3/10/06